

ABSTRACT OF THE DISCLOSURE

Selective oxidizers and methods of selectively oxidizing carbon monoxide in a hydrogen-containing gas mixture are provided. In one aspect, the present selective oxidizer assembly consists essentially of: a feed gas inlet for directing a feed gas comprising carbon monoxide and hydrogen into the assembly; an injector upstream of the feed gas inlet for supplying a gas stream comprising oxygen to the assembly; a catalyst bed for converting the feed gas and oxygen to a process gas, the catalyst bed comprising a selective oxidation catalyst on a metal foam support; and a process gas outlet.

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